

## CLAIMS

1. An application level server (701) connected to an IP network (702),  
 5 the IP network (702) being connected to a terminal (703) via an access node (706) and via an resource reservation proxy being connected to the IP network,  
 the IP network (702) further being connected to an end node (704),  
 the IP network (702) and the proxy (705), using a resource reservation  
 10 protocol,  
**characterised by**  
 the server (701) managing a resource reservation for establishing quality of service between the terminal (703) and the end node (704),  
 the server (701) including a functional entity (707),  
 15 the functional entity (707) having means (709) for instructing the terminal (703) to not use its resource reservation protocol if it has any,  
 the functional entity (707) further having means (708) for identifying necessary parameters, required for performing the resource reservation,  
 the functional entity (707) further having means (710) for changing a signalling  
 20 message so that it indicates that the resource reservation signalling applies from the access node and towards the end node,  
 the functional entity (707) further having means (711) for requesting, from the proxy (705), a specific quality of service according to the necessary parameters, between the proxy (705) and the end node (704) on IP level.  
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2. Application level server (701) according to the previous claim, **characterised**  
 in that the resource reservation protocol is the Resource Reservation Protocol (RSVP) and thus the resource reservation proxy being an RSVP proxy.
- 30 3. The application level server (701) according to the previous claim,  
**characterised** by the functional entity (707) having means (709) for

instructing the terminal (703) to not use its resource reservation protocol if it has any, in an ACF signalling message of H.225/RAS sent from the server (701) to the terminal (703).

4. Application level server (701) according to the claim 1, **characterised** in that one of the necessary parameters is a quality of service mode.
5. Application level server (701) according to the previous claim, **characterised** in that the quality of service mode is identified by the server (701) in a TerminalCapabilitySet message of H.245 sent from the end node (704) towards the terminal (703).
6. Application level server (701) according to claim 1, **characterised** in that one of the necessary parameters is quality of service information.
7. Application level server (701) according to the previous claim, **characterised** in that the quality of service information is identified by the server (701) in a OpenLogicalChannel message of H.245 sent from the terminal (703) towards the end node (704).
8. Application level server (701) according to claim 1, **characterised** in that one of the necessary parameters is a port identification of a port to be used by the end node (704) for reception of an incoming media stream to the end node (704).
9. Application level server (701) according to the previous claim, **characterised** in that the identification of the port to be used by the end node is identified by the server (701) in a Open LogicalChannelAck message of H.245 sent from the end node (704) towards the terminal (703).

10. Application level server (701) according to claim 1, **characterised** by the functional entity (707) having means (710) for changing a signalling message, sent from the terminal (703) towards the end node (704), from indicating quality of services not possible to indicate that quality of service is possible.

11. Application level server (701) according to the previous claim, **characterised** in that the signalling message is a TerminalCapabilitySet of H.245.

12. Application level server (701) according to claim 1, **characterised** by the functional entity (707) having means (710) for changing a signalling message, sent from the end node (704) towards the terminal (703), from indicating that quality of service is possible to indicate that quality of service is not possible.

13. Application level server (701) according to the previous claim, **characterised** in that the signalling message is a TerminalCapabilitySet of H.245.

14. Application level server (701) according to claim 1, **characterised** in that the request of quality of service between the proxy (705) and the end node (704), is sent in a request quality of service message from the server (701) to the proxy (705), the message including the necessary parameters.

15. Communication system (600) including an application level server (609) according to any of the claims 1-14 and an IP network (607) connected to the server (609),

the server (609) routing calls within the communication system,  
the IP network (607) using a resource reservation protocol,  
the communication system (600) further including a terminal (605) being connected the IP network (607) via an access node (603) and via a resource reservation proxy being connected to the IP network,  
the communication system (600) also including an end node (608) being connected to the IP network (607),

the communication system (600) further including means (612) for establishing an access bearer, with a specific quality of service on the link level, between the terminal (605) and the access node (603);

**characterised in that**

the communication system (600) includes a resource reservation protocol proxy (602), having means (613) for performing resource reservation to establish the specific quality of service on an IP level, between the access node (603) and the end node (608).

16. Communication system according to claim 15 **characterised in that** the resource reservation protocol is the Resource Reservation Protocol (RSVP) and the proxy (602) is an RSVP proxy.

17. Communication system according to claim 16 **characterised in that** the resource reservation is initiated by the proxy, by a sent Path signalling message of RSVP including the necessary parameters, from the access node (603) towards the end node (608).

18. Communication system according to any of the previous claims **characterised in that** the access node is a radio access node and that the terminal 605 is connected to the radio access node via a radio link.

19. Communication system according to any of the claims 16-18 **characterised in that** the resource reservation protocol proxy (602) is co-located with the access node (603).

20. Method for resource reservation to establish end-to-end quality of service between a terminal and an end node within a communication system, the communication system including an IP network using a resource reservation protocol,

the communication system further including the terminal being connected to  
an access node, the access node being connected to a resource reservation  
protocol proxy, the proxy being connected to the IP network,  
the IP network being connected to an application level server that routes calls  
and that manages the resource reservation,  
the method including the steps of:

- *indicating* (501) that the resource reservation signalling on IP level applies  
between the proxy and the end node;
- *identifying* (502) necessary parameters for performing the resource  
reservation;
- *performing* (503) the resource reservation, with quality of service on the IP  
level, between the access node and the end node, by means of the resource  
reservation protocol proxy.
- *establishing* (504) an access bearer with a quality of service on the link level,  
between the terminal and the access node;

21. Method according to the previous claim wherein the resource reservation  
protocol used is the Resource Reservation Protocol (RSVP) and the resource  
reservation protocol proxy is an RSVP proxy.

22. Method according to any of the claims 20-21, wherein the step of indicating  
(501) that the resource reservation signalling applies between the proxy and  
the end node is performed by the server, by changing a signalling message,  
sent from the terminal towards the end node, from indicating that quality of  
service not is capable to indicate that quality of service is capable.

23. Method according to the previous claim, wherein said signalling message is a  
TerminalCapabilitySet of H.245.

24. Method according to any of the claims 20-23, wherein the step of indicating  
(501) that the resource reservation signalling applies between the proxy and

the end node is performed by the server, by changing a signalling message, sent from the end node towards the terminal, from indicating that quality of service is capable to indicate that quality of service is not capable.

- 5 25. Method according to the previous claim, wherein said signalling message is a TerminalCapabilitySet of H.245.
26. Method according to any of the claims 20-25, wherein in one of the necessary parameters is a quality of service mode.
- 10 27. Method according to the previous claim, wherein the quality of service mode is identified (502) by the server in a TerminalCapabilitySet message of H.245 sent from the end node towards the terminal.
- 15 28. Method according to any of the claims 20-27, wherein in one of the necessary parameters is quality of service information.
- 20 29. Method according to the previous claim, wherein the quality of service information is identified (502) by the server in an OpenLogicalChannel message of H.245 sent from the terminal towards the end node.
30. Method according to any of the claims 20-29, wherein in one of the necessary parameters is a port identification of a port to be used by the end node for reception of the media stream.
- 25 31. Method according to the previous claim, wherein said port identification is identified (502) by the server in an Open LogicalChannelAck message of H.245 sent from the end node towards the terminal.

32. Method according to any of the claims 20-31, comprising the further step to be taken by the server; requesting from the proxy, quality of service between the access node and the terminal according to the necessary parameters.

33. Method according to the previous claim wherein said request is sent in a request quality of service message, including the necessary parameters.

34. Method according to any of the claims 20-33 wherein the step of performing (503) the resource reservation, is performed by means of the proxy initiating the resource reservation, by a sending a Path signalling message of RSVP from the proxy towards the end node, the message including the necessary parameters.

35. Method according to any of the claims 20-34 wherein the step of performing (503) the resource reservation, is performed by, the resource reservation signalling messages sent from the end node routed to go via the proxy towards the terminal are stopped by the proxy and not forwarded to the terminal.

36. Method according to the previous claim wherein the step of performing (503) the resource reservation, is performed by said resource reservation signalling messages, sent from the end node and stopped by the proxy are, when by the protocol so required, responded to by the proxy instead of the terminal, in a resource reservation signalling message sent to the end node.

37. Method according to any of the claims 20-36 wherein the access node is a radio access node and that the terminal is connected to the radio access node via a radio link.

38. Method according to the previous claim wherein the RSVP proxy is co-located with the radio access node.

39. A computer program product directly loadable into the internal memory of a digital computer within an entity in the communication system according to any of the claims 15-19, including the software code portions for performing the method according to any of the claims 20-38, when said program is run on a computer.

40. A computer program product stored on a computer usable medium, comprising a computer readable program for causing a computer, within an entity in the communication system according to any of the claims 15-19, to control an execution of the method according to any of the claims 20-38.